



Harbour Porpoise Release Program Newsletter

Volume 5

Fall 2003

We have come to the end of another successful year for the Harbour Porpoise Release Program. We would like to thank all of you for ensuring our continued success during 2003, our 13th season.

Here is our annual end-of-season newsletter, telling you about how many porpoises we released, and some of our scientific activities, for the 2003 season.

Porpoises in 2003

2003 was a relatively low year for porpoise entrapments in Grand Manan weirs, with a total of 30 porpoises recorded in weirs this season. Most of these porpoises swam into weirs in Flagg's Cove and around Fish Head. Of the 30 porpoises, nine swam out, 17 were released alive, one died during seining, and the fates of three porpoises are unknown. Our seining success rate for 2003 is therefore 17/18, or just over 94%. This is almost the same as 2002, during which we released 31/34 porpoises, resulting in a success rate just above 91%. Our overall average for the past 12 years is about 94%, so we are consistent from year to year.

We seined for porpoises a total of 11 times: three times with the black mammal seine, twice with the green one, and six times with a herring seine. As in previous years, most of the entrapments occurred in August (14), with eight in July and one in May. There were also seven porpoises in September. Our first porpoise seine of the year (July 26th) was a bit later than normal (usually we seine a few times before the end of July). The last seine (September 14th) was also the busiest: we were able to safely release all six porpoises from Eagle Rock.



Data collected in 2003

We were able to collect biological data from all 17 of the porpoises we released. This year we had seven males and 10 females. Porpoises ranged in size from 96.5 cm to 152 cm, and in weight from 18 to 57 kg (40 to 125 lbs). We had four calves (born this spring), six juveniles and seven adults. The smallest and largest porpoises of the year were a calf released from Eagle Rock on September 14th, and a mother released from First Venture on August 12th. Each year seems to bring its own combination of young and old animals: last year we released more adults (18) than juveniles (7).



We also collect blood samples from porpoises as part of a long-term study monitoring the health of this population. This project was initiated in 1993 and now represents the only long-term health assessment of wild porpoises in the world. Not only are we able to screen our porpoises for infection, disease, basic chemistry, enzyme function (indicators of organ function and stress) and reproductive hormones (indicators of pregnancy and reproductive status), we also bank frozen blood samples for future analyses. Disease transmission in marine mammals is becoming more common, with new viruses and bacteria appearing in different groups of seals and whales each year. Once a new disease has been identified in marine mammals in the Atlantic Ocean, we are able to screen blood samples from our animals for its presence, and thus can use the banked samples to determine when the Bay of Fundy porpoise population might have been exposed to it. This helps epidemiologists trace the path a particular disease might have taken, and can also help identify which species are vulnerable to infection, and why.

For example, last year we were able to document that the Bay of Fundy porpoise population has been very recently exposed to the *Brucellosis* bacterium. This virulent pathogen has been documented to cause serious reproductive failures in domestic



animals, but its impact on harbour porpoises and other marine mammals remains unclear. *Brucellosis* has been detected in seals and porpoises from the eastern North Atlantic, but the degree of exposure in Western Atlantic waters is not well understood. This summer we collected blood samples and bacterial swabs from seven porpoises for this study, and these will be sent to a laboratory in Ottawa this fall for analysis.

Porpoise entrapments over the last 10 years

There is a huge range in the number of porpoises in weirs from year to year, and each summer we have no way of predicting how busy we will all be. We thought you would be interested in seeing the peaks and valleys in the cycle of entrapments over the last decade.

It is clear that the most important factor influencing porpoise entrapments is herring. Over the course of a summer, porpoise entrapments typically peak when herring catches are at their highest (usually in August). Porpoises follow schools of herring, and so when the fish stay offshore, the porpoises do as well. Annual fluctuations in entrapment rates therefore reflect changes in porpoise distribution that are influenced by herring density, herring movements, and possibly the size class of the fish. This summer looks much like 2000 did, when we released only 12 porpoises. 2001 and 1996 represent the two extremes of HPRP

<i>Year</i>	<i>Number of porpoises in weirs</i>
1993	153
1994	77
1995	82
1996	8
1997	35
1998	34
1999	93
2000	20
2001	312
2002	53
2003	30
Total	897

activity, and there does not seem to be any obvious pattern, or predictable cycle, from one year to the next, in terms of the number of porpoises we can expect to see. A better understanding of factors affecting herring movements, and the annual variation in age classes of herring in the Bay, would improve our ability to predict porpoise behaviour each year.

Other Weir Visitors

We usually record a number of minke whales in weirs each year. In 2003 there were at least three that we are aware of, and all of them were released unharmed. At the time of printing of this newsletter, no humpback whales had been seen in weirs this summer, making last year's series of four humpback entrapments seem extremely unusual.

Expansion of the Release Program

With the success of the HPRP on Grand Manan, we would now like to expand the program to include weirs around Campobello and Deer Islands, the Passamaquoddy region, and the Wolves. Last year we laid the groundwork for expansion of the HPRP through a community outreach program



in which we distributed manuals describing the release process to all licensed weir fishers in the Bay of Fundy and by giving talks to local community groups about the Release Program. This year we continued our efforts by having the mainland mammal seine (constructed at the same time as the green mammal seine on Grand Manan) fixed and placed on a rack in Head Harbour. We plan to contact individual weir fishermen in this region personally this fall, and over the next few years would like to build the same kind of successful partnership we have with weir fishers on Grand Manan.

Media Coverage of the HPRP

Hopefully you have all seen the article about the Harbour Porpoise Release Program that appeared in the June 2003 issue of National Geographic magazine and also in their online magazine. The Release Program was also featured in a half-hour documentary on Discovery Channel Canada that aired this past winter as part of the “Into the Wild” series. This summer we were visited by a film crew from National Geographic International, here filming a documentary about porpoises (all six species including the harbour porpoise!) throughout the world. Some of you were kind enough to accommodate the crew on some porpoise and herring seines. Nat. Geo. link: magma.nationalgeographic.com/ngm/0306/feature4/index.html

Thanks to our Supporters for 2003

The Harbour Porpoise Release Program is run using funds obtained from many sources, including grants from conservation organizations, the weir industry, and donations from private individuals. Without this financial backing, we would be unable to pay for boat gas, boat and seining equipment, releases, and travel and room and board for the Release Team. We are thankful to our supporters, many of whom have stood solidly behind the program for many years. This year we gratefully acknowledge the support of Connors Brothers Ltd., the International Fund for Animal Welfare, Whale and Dolphin Conservation Society U.K., and the Gulf of Maine Council on the Marine Environment. We also thank the weir fishery, and all local weir fishermen, for continuing to support and participate in the HPRP. Some of you also provide the program with an extra helping hand by helping us to move and store the mammal seines, and we really appreciate it!



Plans for 2004

As always, we plan to return next summer to run the Harbour Porpoise Release Program for another year. We also hope to continue our efforts to expand the HPRP to Campobello and Deer Islands, the Passamaquoddy region, and the Wolves. Ideally we would like to have a mammal seine within easy reach of all weir fishermen in the area, and we are hoping to raise enough money next summer to meet this goal.

Over the Winter...

During the winter we are scattered all over the continent. Laurie Murison lives on Grand Manan year-round and she can address any questions or correspondence sent to the Research Station. Andrew Westgate is a Ph.D. student at Duke University in North Carolina, working on the population structure of common dolphins in the Western North Atlantic. Aleksija Neimanis is a veterinarian, now becoming a specialist in wildlife pathology at the University of Saskatchewan in Saskatoon. Heather Koopman is currently a postdoctoral investigator at Woods Hole Oceanographic Institution on Cape Cod, where she works on the structure and function of marine lipids. After Christmas, Heather will become Assistant Professor at the University of North Carolina at Wilmington. Other faces you would have seen this summer included Leigh Bird, Megan Hamilton, Aelita Neimanis, and Dr. Krystal Tolley.

Please feel free to contact us any time, if you have questions, or suggestions, or want to see us about something interesting you have seen. You can reach us through the Research Station, or (for those of you with access to the internet) via our email addresses:

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Thank you very much and have a good winter! We look forward to seeing you again next year for another season of the Harbour Porpoise Release Program.

